



Crystal P. McBride
Bachelor of Science
Jackson State University, 2007
Major: Mathematics

Faculty Advisor: Dr. Houssain Kettani

Program:
Research Alliance in Math & Science (RAMS)

Email: mcbridecp@ornl.gov
Home: cris_mac3113@yahoo.com

Research Area: Computational Mathematics

The summer tasks will be to assist with the development of the Gray-Fata-Ma research paper entitled "Iterative Solution of Hermite Boundary Integral Equations." The tasks of this work are to devise smooth interpolation of the boundary functions. Although new approximations will be examined, the main goal is to formulate the solution of moving boundary problems manipulating the higher order approximation with high accuracy. The applications of the Boundary Element Method encompasses fields such as: elasticity, geomechanics, structural mechanics, electromagnetics, acoustics, hydraulics, low- Reynolds number hydrodynamics, biomechanics, off- shore structures, and cathodic protection.

Research Mentors

Dr. Leonard Gray
Computational Mathematics Group
Computer Science and Mathematics
Division
Oak Ridge National Laboratory

(865) 574-8189
graylj1@ornl.gov

Dr. Sylvain Nintcheu Fata
Computational Mathematics Group
Computer Science and Mathematics
Division
Oak Ridge National Laboratory

(865) 574-0680
nintcheufats@ornl.gov